Homework Handout B
- Percentile Problems

1(c) \[ \begin{align*}
\text{AVG} & = 500 \\
\text{SD} & = 75 \\
\end{align*} \]

So, we look up
30 under area
column of Normal Table
and get \( Z = 0.4 \)

65th percentile = 500 + \((0.4)(75)\) = 500 + 30 = 530
(Grade)

2(c) \[ \begin{align*}
\text{AVG} & = 800 \\
\text{SD} & = 150 \\
\end{align*} \]

Looking up 54
for area we
get \( Z = -0.75 \)
(Note: \( Z \) is negative since we're looking for a
percentile less than the 50th percentile.)

Cost = 800 + \((-0.75)(150)\)
= 800 - 112.5
= $687.50

i.e. 23% of accident costs are less than $687.50